

## CLAIMS

1. A method of dispensing a pharmaceutical comprising the steps of:  
dispensing said pharmaceutical from an intelligent drug dispensing  
5 appliance having: a pharmaceutical reservoir and a data network interface;  
detecting an impending depletion of the pharmaceutical in the reservoir;  
and,  
soliciting a pharmaceutical refill by way of a data message sent via a data  
network to which said dispensing appliance is coupled via said data network  
10 interface.
2. The method of claim 1 wherein said step of soliciting a pharmaceutical refill by  
way of a data message, is further comprised of the step of: soliciting a pharmaceutical  
refill by way of a secure data message sent via a data network to which said dispensing  
15 appliance is coupled.
3. The method of claim 1 wherein said step of soliciting a pharmaceutical refill by  
way of a data message order includes the steps of:  
sending a data message over a data network, from said intelligent  
20 drug dispensing appliance to at least one of:  
a health care service provider;  
a pharmaceutical provider;  
an insurance provider;  
said data message from said intelligent drug dispensing appliance  
25 identifying at least one of: the patient for whom said pharmaceutical  
medication is required; pharmaceutical cost; the identity of the particular  
pharmaceutical; the pharmaceutical provider.
4. The method of claim 1 including the step of sending a data message to said health  
30 care service provider so as to effect payment for the provision of health care service.

5. The method of claim 1 including the step of sending a data message to a pharmaceutical provider to effect payment for the provision of pharmaceutical.

6. The method of claim 1 wherein said data message includes a first data message sent to a health care service provider and a second data message sent to a pharmaceutical provider.

7. The method of claim 3 wherein said step of sending a data message order to an insurance provider includes the additional step of the insurance provider authorizing payment for the pharmaceutical refill.

8. The method of claim 4 and claim 7 wherein said prescription data message is a secure data message.

9. The method of claim 4 wherein said prescription data message is a web hosted communication.

10. A method of electronically dispensing pharmaceuticals comprising the steps of:  
transmitting via a data network from a medical service provider, to at least one of:  
a patient's intelligent drug dispensing appliance and a pharmaceutical provider,  
a prescription data message for a pharmaceutical to be dispensed to said patient according to a regimen specified by said medical service provider in said secure prescription data message.

11. The method of claim 10 further including the step of validating said prescription data message.

12. The method of claim 10 wherein said prescription data message is an addressed data packet communication.

13. A method of electronically dispensing pharmaceuticals comprising the steps of:

transmitting from a medical service provider's computer to at least one pharmaceutical provider's computer via a data network, a secure prescription data message for a pharmaceutical to be dispensed to a patient, said secure prescription data message including dosage instructions.

14. The method of claim 13 further including the step of sending a data message via a data network from said pharmaceutical provider's computer to a patient's intelligent drug dispensing appliance so as to direct said appliance to administer said pharmaceutical according to instructions of said medical service provider.

15. The method of claim 13 further including the step of validating said secure prescription data message.

16. A method of electronically dispensing pharmaceutical medications comprising the steps of:

transmitting from a medical service provider's computer to a patient's intelligent drug delivery appliance via a data network, a secure electronic prescription data message for a pharmaceutical to be dispensed to a patient, said secure prescription data message including dosage instructions; and

transmitting via a data network, said secure prescription data message from said patient's intelligent drug delivery appliance to a pharmaceutical provider.

17. A method of electronically dispensing pharmaceuticals comprising the steps of:

transmitting from a patient's computer to at least one pharmaceutical provider's computer via a data network, a secure electronic prescription data message for a pharmaceutical to be dispensed to said patient.

18. The method of claim 17 wherein said step of transmitting from a patient's computer includes the step of transmitting said secure electronic prescription data message from a patient's intelligent drug delivery appliance.

19. The method of claim 17 further including the step of validating said secure electronic prescription data message.

20. The method of claim 17 further including the steps of:

receiving at said patient's computer from the at least one pharmaceutical provider, a data message that comprises, terms upon which said pharmaceutical provider offers to supply said pharmaceutical to said patient.

21. The method of claim 17 further including the step of sending a data message from said patient's computer to said at least one pharmaceutical provider's computer to effect payment for said pharmaceutical.

22. An intelligent drug dispensing appliance comprising:

a controller;

a reservoir of pharmaceutical to be dispensed over time to a patient;

a drug delivery mechanism, coupled to, and responsive to the controller and to the reservoir, to dispense a pharmaceutical to a patient from the reservoir in response to signals from said controller;

a data network interface coupled to said controller.

23. The intelligent drug dispensing appliance of claim 22 including a data network interface that is capable of sending a data message over a data network through said data network interface to at least one of:

a health care service provider;

a pharmaceutical supplier;

said data message from said intelligent drug dispensing appliance identifying the patient for whom said pharmaceutical is required and the identity of the particular medication.

24. The intelligent drug dispensing appliance of claim 22 including a data network interface that is capable of receiving a data message over a data network through said data network interface from at least one of:

- 5                   a health care service provider;  
                  a pharmaceutical supplier;

                  said data message to said intelligent drug dispensing appliance identifying the patient for whom said pharmaceutical is required and the identity of the particular medication.

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25. The intelligent drug dispensing appliance of claim 22 further including a human/display interface.

26. The intelligent drug dispensing appliance of claims 23 and 24 wherein said data  
15 network interface is capable of sending a data message to effect payment for the provision of health care service.

27. The intelligent drug dispensing appliance of claims 23 and 24 wherein said data  
20 network interface is capable of sending a data message to effect payment for the provision of a pharmaceutical.

28. The intelligent drug dispensing appliance of claims 23 and 24 wherein said data network interface is capable of sending a data message transported via the Internet.

25 29. The intelligent drug dispensing appliance of claims 23 and 24 where said data network interface is capable of sending a data message transported via a wireless communication device.

30 30. The intelligent drug dispensing appliance of claim 22 further including a pharmaceutical level detector.

31. An intelligent drug dispensing system providing replenishment of pharmaceutical medication, said system comprising:

an intelligent drug dispensing appliance, including a data network interface through which pharmaceutical replenishment request signals can be sent from said intelligent drug dispensing appliance;

a pharmaceutical replenishment request data server coupled to said data network to receive medication replenishment request signals from at least one intelligent drug dispensing appliance.

32. An intelligent drug dispensing system providing replenishment of pharmaceutical medication, said system comprising:

an intelligent drug dispensing appliance, including a data network interface through which pharmaceutical replenishment request signals can be received;

a pharmaceutical replenishment request data server coupled to said data network to send medication replenishment request signals to at least one intelligent drug dispensing appliance.

33. The intelligent drug dispensing system of claims 31 and 32 wherein said pharmaceutical replenishment request data server is comprised of a health care service provider computer, responsive to data messages from a patient of said health care service provider to generate drug refill orders.

34. The intelligent drug dispensing system of claim 31 and 32 wherein said pharmaceutical replenishment request data server is comprised of a drug supplier computer, responsive to data messages from either a patient or a health care service provider so as to effect shipment of medication to said patient.

35. The intelligent drug dispensing system of claim 31 and 32 wherein said pharmaceutical replenishment request data server is comprised of an insurance provider computer, responsive to data messages from either a patient or a health care service provider so as to approve payment for said medication.

36. An intelligent drug dispensing system providing automatic replenishment of pharmaceuticals, said system comprising:

a pharmaceutical replenishment request data server operatively coupled to a data network so as to receive pharmaceutical replenishment request messages from at least one intelligent drug dispensing appliance.

37. The intelligent drug dispensing system of claim 36 wherein said pharmaceutical replenishment request data server is comprised of a health care service provider computer, responsive to data messages sent from a patient of said health care service provider to generate drug refill orders.

38. intelligent drug dispensing system of claim 36 wherein said pharmaceutical replenishment request data server is comprised of a pharmaceutical provider computer, responsive to data messages sent from a patient of said health care service provider to generate drug refill orders.

39. The intelligent drug dispensing system of claim 36 wherein said pharmaceutical replenishment request data server is comprised of an insurance carrier computer, responsive to data messages sent from a health care service provider to generate drug refill orders for a patient.

40. A method of dispensing a pharmaceutical comprising the steps of:  
receiving a request for a pharmaceutical in the form of a first data message received via a data network;  
upon the receipt of said data message requesting a pharmaceutical, receiving an approval message via a second message;  
upon receipt of the approval message, filling said request for said pharmaceutical.

41. The method of claim 40 further including the step of: sending a data message to a drug delivery appliance via the data network so as to dispense said pharmaceutical.

42. The method of claim 40 wherein said receiving a request includes the step of sending a data message from a drug dispensing appliance.

43. The method of claim 40 wherein said step of receiving a request includes the step  
5 of sending a data message from a health care service provider's computer.

44. The method of claim 40 wherein the step of approving said order is performed by a health care service provider.

10 45. The method of claim 40 wherein the step of receiving an order is performed by a pharmaceutical supplier.

46. The method of claim 40 wherein the request is a message received by multiple  
pharmaceutical suppliers.

15 47. The method of claim 40 wherein the request is a message received by multiple pharmaceutical suppliers and fewer than all is selected.